OPGW Cable

IEEE 1138 · IEC 60794-4-10

Optical fibre composite overhead ground wire — lightning shielding and utility telecom in a single conductor hung at the top of the tower.

FIBRE COUNT	OPTICAL UNIT	OUTER STRANDS	STANDARDS
12–96 fibres	Stainless steel / aluminium clad	Aluminium / ACS wires	IEEE 1138, IEC 60794-4-10

TYPICAL APPLICATIONS

- Shield wire with integrated utility telecom
- Protection signalling and dispatch networks
- Fibre leasing along transmission corridors
- SCADA and substation communication links

CONSTRUCTION

- Loose-tube optical unit, gel-filled or dry core
- Stainless-steel or aluminium-clad fibre tube
- Aluminium or ACS outer strands
- Fibre counts from 12 to 96 (higher on request)
- Excess fibre length controlled for rated tension

TECHNICAL DATA

Function	Overhead ground wire with optical fibres	**Fault-current duty**	Sized to system requirements
Fibre count	12–96 single-mode (G.652.D)	**Standards**	IEEE 1138, IEC 60794-4-10, ITU-T G.652
Optical unit	Stainless steel or aluminium-clad tube	**Packing**	Steel drums, project-specific lengths
Outer strands	Aluminium / aluminium-clad steel		

Typical values. The final construction is confirmed on the order datasheet and the released drawing.

STANDARDS, TESTING AND DOCUMENTS

Routine tests	Conductor resistance, voltage test and insulation resistance on every length
Type tests	Type-test reports for each construction, witnessed by a third party on request
Documents with the drum	Packing list, drum list, routine test certificate, datasheet, CO / FORM A
Traceability	Drum number marked and recorded against the routine test certificate

OTHER CONSTRUCTIONS FROM THE SAME RANGE

Aluminium Clad Steel Conductor	www.zmsoverheadcable.com/products/special-overhead-conductors/aluminum-clad-steel-conductor/
ACAR Conductor	www.zmsoverheadcable.com/products/special-overhead-conductors/acar-conductor/
Back to special conductors	www.zmsoverheadcable.com/products/special-overhead-conductors/

PACKING AND DELIVERY

Drum	Wooden or steel-framed export drum, 250–500 m per drum by cross-section
Packing	Sealed ends, protected lugs, desiccant, UV-resistant wrap
Marking	Drum no., designation, voltage, cross-section, length, gross weight
Lead time	15–25 working days for standard builds
Terms	FOB Qingdao, Tianjin or Shanghai. CIF, CFR and DAP on request

HOW TO ORDER

To quote, send the voltage class (U0/U), conductor material and cross-section, screen or armour, sheath, drum length, delivery port and the standard the project specifies. We return a released drawing, the test programme and a drum plan with the quotation.

SELECTION NOTES

What fault-current rating do I need?
The OPGW must survive the maximum earth fault current for its clearing time without fibre damage. Send the fault level and clearing time; we will size the conductive cross-section accordingly.

How many fibres should I specify?
Common counts are 24, 48 and 96. Specify for current needs plus spare capacity — the fibre count cannot be increased after stringing.

Can OPGW replace an existing shield wire?
Yes, provided diameter, weight and breaking load are compatible with the existing towers and fittings. Send the existing wire data and we will confirm the match.

Certification. Environmental management to ISO 14001:2015 and occupational health and safety to ISO 45001:2018, with CE marking under the EU low-voltage and EMC directives. Independent inspection and type testing are carried out through ISO/IEC 17020 and 17025 accredited laboratories. Certificate numbers and validity dates are published at www.zmsoverheadcable.com/certificates/.

Request a quotation for this cable

Send the specification sheet or the cable schedule and we return a released drawing, the test programme and a drum plan with the price.

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